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THE INFLUENCE OF THERAPIST ATTENTION ON SELF-INJURY DURING A TANGIBLE CONDITION

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This study investigated the effects of therapist attention on the self-injurious behavior (SIB) of a 6-year-old girl with developmental disabilities. After results of a functional analysis indicated that SIB was maintained by attention and tangible reinforcement, tangible conditions with and without contingent verbal attention were compared. Results suggested that the inclusion of verbal attention in a tangible condition may confound functional analysis outcomes for behavior that is maintained by attention.

DESCRIPTORS: functional analysis, positive reinforcement, self-injurious behavior, tangible condition

Iwata, Dorsey, Slifer, Bauman, and Richman (1982/1994) introduced a systematic methodology for determining the operant function of self-injurious behavior (SIB). When applying this functional analysis method, one must give close consideration to variables that could confound the outcomes. The delivery of therapist attention is especially germane because problem behavior often is sensitive to attention as reinforcement. Controlling all forms of attention is extremely difficult. Some level of proximity, eye contact, and verbal interchange often is needed to implement functional analysis conditions. Tests for sensitivity to tangible reinforcement may be especially prone to confounding by attention because it is difficult to restrict and deliver materials exclusive of attention. When problem behavior is maintained by attention, behavior may appear to serve a tangible function if attention is delivered when tangible items are returned contingent upon problem behavior. Identifying irrelevant functions may lead practitioners and caregivers to overlook the role of true maintaining consequences and to manipulate stimuli that are less potent than expected when developing function-based treatments. In this case study, results of an initial functional analysis suggested that the SIB of a girl with severe disabilities was maintained by both attention and access to tangible items. The purpose of this study was to determine if observed SIB during the tangible condition was confounded by the simultaneous delivery of therapist attention.

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METHOD

Participant, Setting, and Response Measurement

Ali was a 6-year-old girl with developmental disabilities who functioned in the profound range of mental retardation. She had been referred for the analysis and treatment of severe SIB, defined as forceful contact between the head and hand, striking any object with the head, or closing the teeth

around any portion of the wrist or hand. Ali was enrolled in a self-contained preschool classroom for children with severe communication delays. All sessions were conducted in an unused classroom in a public elementary school. Across all sessions, SIB was recorded as a frequency and expressed as number of responses per minute. A second observer independently collected data during 38% of the sessions. Agreement percentages, calculated using methods described by Ringdahl, Vollmer, Borrero, and Connell (2001), averaged 93% (range, 84% to 100%). All sessions in each phase were 10 min long.

Functional Analysis

Procedures for the attention, demand, and play conditions were similar to those described by Iwata et al. (1982/1994). A tangible condition was conducted instead of an alone condition. The alone condition was omitted at the request of the school. Procedures used during the tangible condition were analogous to those described by Mueller, Wilczynski, Moore, Fusilier, and Trahant (2001). A highly preferred stimulus (juice) was presented prior to the session. After 1 min of engagement, the experimenter told Ali, "It's time to put the juice away. You can play with these toys instead," and removed the juice. Contingent on each instance of SIB, the therapist said, "You must want your juice," and provided 30-s access to the juice. Stimuli delivered and removed during this condition were selected using procedures described by Mueller et al.

Follow-Up Analysis

The influence of therapist attention in the tangible condition was evaluated via a reversal design. In one phase, procedures were identical to those described above. That is, verbal attention accompanied the restriction and contingent return of items. In the other phase, no attention was delivered at any time during the session, and all other procedures were identical to those described above.

RESULTS AND DISCUSSION

As seen in the top panel of Figure 1, attention and tangible conditions contained more SIB than the other conditions during the functional analysis. The results appear to demonstrate multiple functions for Ali's SIB. The results of the follow-up analysis are depicted in the bottom panel of Figure 1. When verbal attention was delivered with the restriction and return of juice, SIB occurred at a much higher frequency than when verbal attention was withheld. Further indication that attention maintained Ali's SIB comes from the possible extinction burst observed during the first three sessions in which attention was withheld.

These results demonstrate that the inclusion of verbal attention in a tangible condition may confound the outcomes of functional analysis when behavior is maintained by attention. Attention could also easily influence the results of other conditions when attention is delivered simultaneously with the test consequence (e.g., providing access to attention when permitting escape from instructions in the demand condition). Other variables related to social interaction, such as brief therapist proximity, may be adequate to influence responding even when verbal attention is limited. Practical solutions for the tangible condition might be to restrict attention as much as possible (e.g., completely remove all forms of verbal attention, as was done in this study) or to weaken the dependency between problem behavior and therapist attention by delivering attention on a response-independent schedule. Further research is needed to determine the extent to which certain forms of attention may influence the outcome of other functional analysis conditions.

Many procedural variations of the tangi-

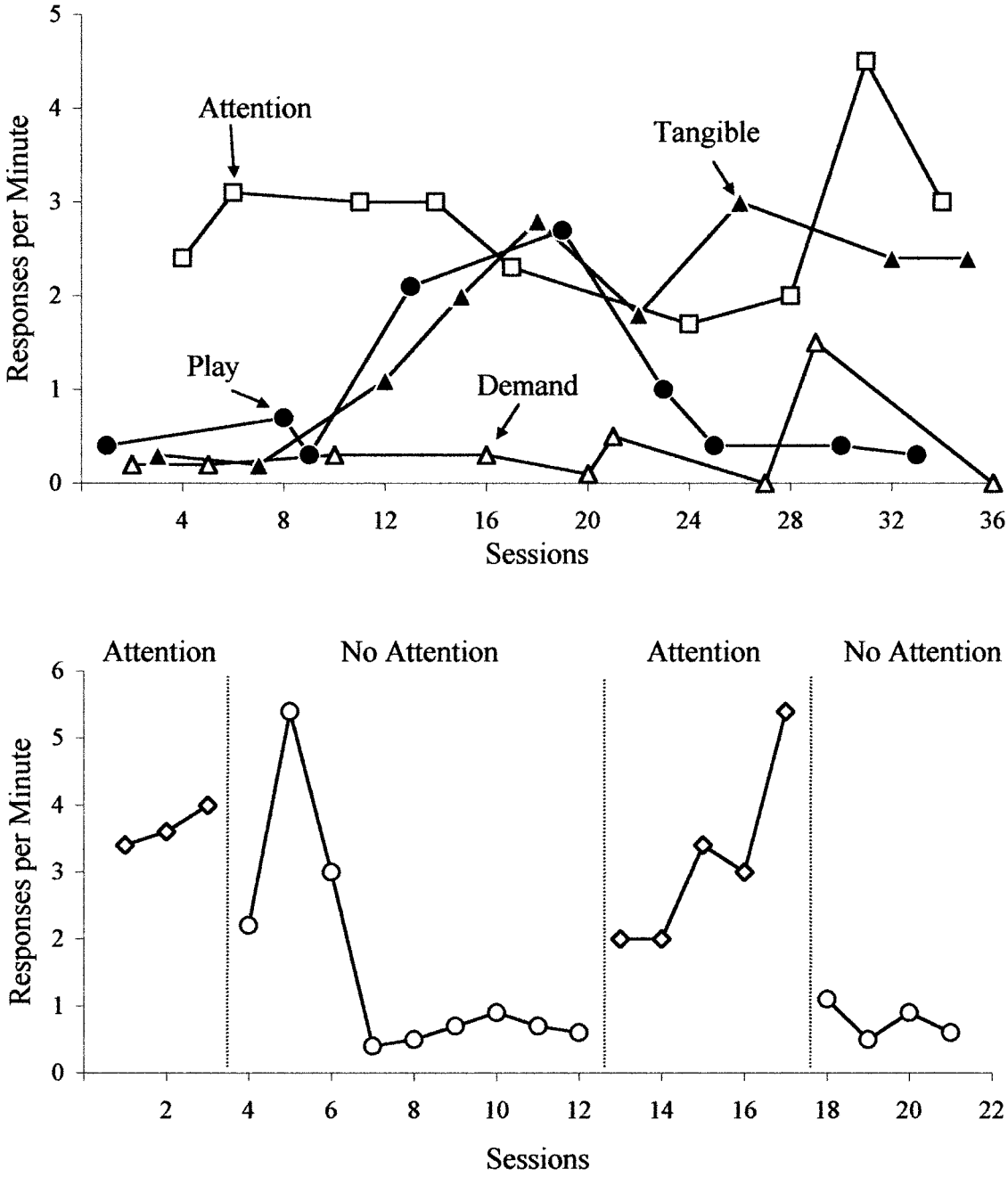

Figure 1. Rate of self-injurious behavior during the initial functional analysis (top panel) and the follow-up analysis (bottom panel).

ble condition have been described in the literature (e.g., Fisher et al., 1993; Mueller et al., 2001). Future research on procedural aspects of this condition would be instructive. For example, factors such as the duration of presession exposure to the tested tangible item, or the availability of alternative stimuli when the tested item is restricted, could be evaluated. Another interesting area in need of research is the selection of putative tan-

gible reinforcers to test in a functional analysis. For example, Shirley, Iwata, and Kahng (1999) found that tangible stimuli identified through preference assessments for use in a functional analysis did not currently maintain SIB, but acquired such control when presented contingently for SIB. In summary, the current study illustrates the value of scrutinizing one procedural aspect of functional analysis, thus warranting future research to study other procedural aspects of the methodology (e.g., Borrero, Vollmer, Wright, Lerman, & Kelley, 2002).

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